VESTODUR® X4159

PBT-I... Evonik Operations GmbH

Product Texts

Polybutylene terephthalate resin with high flexibility and impact resistance

VESTODUR® X4159 is a high viscosity semi-crystalline thermoplastic polyester resin based on modified polybutylene terephthalate (PBT). Test bars made of this resin have high flexibility and impact resistance.

VESTODUR® X4159 is supplied as cylindrical pellets in polyethylene packaging.

The use of colorants may affect property values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

The values presented are typical or average values, they do not constitute a specification.
FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM
OR VISIT OUR PRODUCT AT WWW.VESTODUR.COM

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**10 / ***	cm³/10min	ISO 1133
Temperature	**250 / ***	°C	-
Load	**2.16 / ***	kg	-
[C] Molding shrinkage, parallel	**2.0 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**2.0 / ***	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**500 / 580**	MPa	ISO 527
[C] Yield stress	**27 / -**	MPa	ISO 527
[C] Yield strain	**25 / -**	%	ISO 527
[C] Nominal strain at break	**>50 / -**	%	ISO 527
[C] Charpy impact strength, +23°C	**N / 45**	kJ/m²	ISO 179/1eU
[C] Type of failure	**- / C**	-	-
[C] Charpy impact strength, -30°C	**N / 21**	kJ/m²	ISO 179/1eU
[C] Type of failure	**- / C**	-	-
[C] Charpy notched impact strength, +23°C	**30 / 3**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Charpy notched impact strength, -30°C	**8 / 1**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / C**	-	-
[C] Shore D hardness	**70 / ***	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**200 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**50 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**110 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**130 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**120 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**120 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion -40°C to +100°C, parallel	**120**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion -40°C to +100°C, normal	**120**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-

[C] Oxygen index	**25 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**4 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**350 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E11 / -**	Ohm*m	IEC 62631-3-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**0.4 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.3 / ***	%	Sim. to ISO 62
[C] Density	**1260 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Film Extrusion, Profile Extrusion

Delivery form
Pellets

Special Characteristics
High impact or impact modified

Certifications
Food contact, Food approval 10/2011

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa